

## CLAIMS

I claim:

1. An endodontic instrument, which comprises:  
a handle having an elongated base with a threaded projection at a first end; and  
a cap containing a channel extending through a first end of said cap with a first portion of the channel being threaded for mating with the projection of the elongated base of said handle, said cap possessing a side, and said cap also having a second end containing an aperture through which an endodontic file can project, the diameter of the aperture being selected to be larger than the diameter of the endodontic file but smaller than the diameter of a plastic cap attached to the endodontic file.
2. The endodontic instrument as recited in claim 1, wherein:  
the elongated base has a maximum outer diameter;  
said cap has a maximum outer diameter; and  
the maximum outer diameter of said cap is substantially the same as the maximum outer diameter of the elongated base.
3. The endodontic instrument as recited in claim 1, further comprising:  
an endodontic file with a tip and also with a plastic cap attached to said endodontic file at an end opposite to the tip, said endodontic file extending through the aperture in the second end of said cap and the attached plastic cap being contained within the channel of said cap.
4. The endodontic instrument as recited in claim 3, wherein:  
the elongated base has a maximum outer diameter;  
said cap has a maximum outer diameter; and  
the maximum outer diameter of said cap is substantially the same as the maximum outer diameter of the elongated base.
5. The endodontic instrument as recited in claim 1, wherein:  
the aperture in the second end of said cap extends to the side of said cap and, on such side, is enlarged to dimensions sufficient to permit the introduction in the channel of the plastic cap attached to the endodontic file.
6. The endodontic instrument as recited in claim 5, wherein:

the elongated base has a maximum outer diameter;

said cap has a maximum outer diameter; and

the maximum outer diameter of said cap is substantially the same as the maximum outer diameter of the elongated base.

7. The endodontic instrument as recited in claim 5, further comprising:

an endodontic file with a tip, with a centerline, and also with a plastic cap attached to said endodontic file at an end opposite to the tip, said endodontic file extending through the aperture in the second end of said cap and the attached plastic cap being contained within the channel of said cap and said endodontic file, as said endodontic file proceeds toward the tip, initially moving away from the centerline and then curving back toward and crossing the centerline.

8. The endodontic instrument as recited in claim 7, wherein:

the elongated base has a maximum outer diameter;

said cap has a maximum outer diameter; and

the maximum outer diameter of said cap is substantially the same as the maximum outer diameter of the elongated base.

9. An endodontic instrument, which comprises:

a handle having an elongated base with the base possessing a threaded projection at a first end and a maximum outer diameter;

a cap containing a channel extending through a first end of said cap with a first portion of the channel being threaded for mating with the projection of the elongated base of said handle, said cap possessing a side, said cap having a maximum outer diameter that is substantially the same as the maximum outer diameter of the elongated base, and said cap also having a second end containing an aperture through which an endodontic file can project, the diameter of the aperture being selected to be larger than the diameter of the endodontic file but smaller than the diameter of a plastic cap attached to the endodontic file; and

an endodontic file with a tip and also with a plastic cap attached to said endodontic file at an end opposite to the tip, said endodontic file extending through the

aperture in the second end of said cap and the attached plastic cap being contained within the channel of said cap.

10. An endodontic instrument, which comprises:

a handle having an elongated base with the base possessing a threaded projection at a first end and a maximum outer diameter;

a cap containing a channel extending through a first end of said cap with a first portion of the channel being threaded for mating with the projection of the elongated base of said handle, said cap possessing a side, said cap having a maximum outer diameter that is substantially the same as the maximum outer diameter of the elongated base, and said cap also having a second end containing an aperture through which an endodontic file can project, the diameter of the aperture being selected to be larger than the diameter of the endodontic file but smaller than the diameter of a plastic cap attached to the endodontic file; and

an endodontic file with a tip, with a centerline, and also with a plastic cap attached to said endodontic file at an end opposite to the tip, said endodontic file extending through the aperture in the second end of said cap and the attached plastic cap being contained within the channel of said cap and said endodontic file, as said endodontic file proceeds toward the tip, initially moving away from the centerline and then curving back toward and crossing the centerline.